P36

P37

8E9

10

15

20

Peptide Sequence P121322-3351 PheCysLeuGlyProCysProTyrIleTrpSerLeuAspThr P28 (322-344) PheCysLeuGlyProCysProTyrIleTrpSerLeuAspThrGlnLysVal LeuAlaLeuTyr P29 (313-335) HisGluProLysGlyTyrHisAlaAsnPheCysLeuGlyProCysProTyr IleTrpSerLeuAspThr P30 PheSerLeuGlyProCysProTyrIleTrpSerLeuAspThr P31 PheCysLeuGlyProSerProTyrIleTrpSerLeuAspThr P32 PheSerLeuGlyProSerProTyrIleTrpSerLeuAspThr P33 PheCysLeuGlyProCysProTyrIleTrpSerAspAspAsp P34 AspAspAspGlyProCysProTyrIleTrpSerLeuAspThr P35 AspAspAspGlyProCysProTyrIleTrpSerAspAspAsp

Fig. 6 shows the results of inhibition of TGF β 1 by 5 the peptides in Table 3.

GlyProCysProTyrIleTrpSerAspAspAsp

AspAspAspGlyProCysProTyrIleTrpSer

AspGlyProCysProTyrIleTrpSerAsp

It can be seen from Fig. 6 that peptide P29 is active. This peptide includes the previously tested peptide P12 and has 9 extra amino acids towards the Nterminal end (Fig. 4). Investigations conducted by Quian SW et al. (1992) Proc. Natl. Acad. Sci. 89:6290-6294) and by Burmester JK et al. (1993) Proc. Natl. Acad. Sci. 90:8628-8632) using chimeric recombinant proteins identified a region of $TGF\beta1$ that is necessary for the activity of this cytokine (amino acids 40 to 82 in the sequence of mature $TGF\beta1$). It was speculated that peptide P29 (amino acids 34 to 56 in the sequence of mature $TGF\beta1)$, extending over a larger region than peptide P12 (amino acids 43 to 56), might acquire a three-dimensional structure more like the structure of the TGF β 1 in circulation. For this reason, peptide P29 was used for tests of binding to the cell receptors, based on affinity labelling.